

REMARKS

The present amendment and request for reconsideration is filed in response to the Office Action mailed January 21, 2005, the period of response having been extended to May 21, 2005.

In the Office Action, Claim 17 was apparently rejected because the limitation of "adjusting the third set of data that defines a pattern of objects to be created lithographically until a simulation of a pattern created lithographically from the third set of data substantially matches the new target layer" was unclear. Applicants have amended Claim 17 to depend from Claim 16. It is believed that the changes made to Claims 16 and 17 clearly recite the subject matter regarded as the invention. It is therefore requested that the Examiner withdraw the objection to Claim 17.

Claims 1-25 were rejected under 35 U.S.C. § 102(e) as being anticipated by Pierrat, U.S. Patent No. 6,584,609. Applicants respectfully traverse the rejection.

The Pierrat patent cited by the Examiner describes a model-based optical proximity correction system that "may handle numerous effects such as mask fabrication effects, optical effects, resist processing effects, dry or wet etching, and other effects of the optical lithography process." See Col. 5, lines 25-32. Applicants respectfully submit that the Pierrat reference does not teach or suggest the claimed combination of features including using the results of an etch simulation to create a second set of mask/reticle data that defines at least one new or modified feature to be created photolithographically and then performing optical process and correction (OPC) using the second set of data as an input, that is the subject of Claims 1, 8, 15, and 20, and the claims that depend thereon, as shown in Figure 1. In addition, the Pierrat reference does not teach or suggest a method of compensating mask/reticle data including the acts of calculating etch biases from an etch simulation result, and applying the previously calculated etch biases within an optical process correction (OPC) loop that adjusts the mask/reticle data for

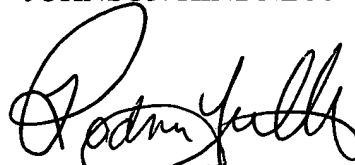
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optical/resist process distortions as an input that is the subject of Claims 5, 12, and 23, and the etch claims that depend thereon, as shown in Figure 2. The Pierrat patent only suggests that the OPC model can take into consideration various processes that occur during a photolithographic processing. Nothing in the Pierrat reference teaches or suggests that the etch effects can be calculated and applied as an input prior to beginning OPC, or teaches or suggests using previously calculated etch effects within an OPC loop. As such, it is submitted that Claims 1-25 are allowable over the cited reference.

In light of the above, it is submitted that all claims are in condition for allowance. It is therefore requested that the Examiner withdraw the rejections and pass this case to issue at the earliest possible date.

Respectfully submitted,

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I hereby certify that this correspondence is being deposited with the U.S. Postal Service in a sealed envelope as first class mail with postage thereon fully prepaid and addressed to Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the below date.

Date:

May 19, 2005



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